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THE SCOTTISH NATURALIST

Founded 1871

A Journal of Scottish Natural History

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Founded 1871

A Journal of Scottish Natural History

With which is incorporated *The Annals of Scottish Natural History* and *The Western Naturalist*

115th Year	2003
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The Scottish Naturalist is the national journal of Scottish natural history. It was founded in 1871 by Dr. F. Buchanan White, of Perthshire, and in 1988 completed one hundred years of publication. The journal exists to provide a medium for the publication of original work on all aspects of Scottish natural science. All contributions, however, represent the personal opinions of the authors concerned, and do not necessarily reflect the views of the Editors of the Scottish Naturalist.

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ROBERT BROWN'S MANUSCRIPT DESCRIPTIONS OF BRITISH AND IRISH PLANTS (B.93) (1792–1800), WITH INDEXES TO BOTANICAL NAMES AND PLACES

1. MANUSCRIPT DESCRIPTION AND DISCUSSION

By E. CHARLES NELSON Wisbech, Cambridgeshire

Introduction

2003

The botanical manuscripts of the Scottish botanist Robert Brown (1773–1858) have not received much attention, except those relating to the voyage of HMS *Investigator* (1801–1805). One reason is that Brown's handwriting is often hard to decipher, making any concerted study difficult and time-consuming. The recent publication of Brown's *Investigator* diary (Vallance, Moore and Groves, 2001) prompted me to resume work which I had commenced several decades ago on Brown's diary for the year 1800, the year before he embarked on *Investigator*, when he was in Ireland with his regiment. A transcript of this 1800 diary has been completed (some extracts have appeared elsewhere; see e.g. Bowering, Reilly and Whittaker, 1995; Nelson, 1998) and eventually it is hoped to publish an annotated edition.

In his 1800 diary (manuscript **B.12** in Moore and Beasley, 1997), Brown frequently recorded his botanical observations and often referred to transcribing plant descriptions. To enable me to annotate the diary, it was desirable also to study any other manuscripts which related to his Irish botanical investigations, especially those which contained the draft, or the transcribed, descriptions. Thus this account of **B.93** (see Moore and Beasley, 1997), one of Brown's botanical manuscripts held in The Natural History Museum, London, described as:

B.93. A brown cloth and leather-bound folio box. $268 \times 114 \times 379$ mm, lettered on spine 'R BROWN — DESCRIPTIONS OF PLANTS 1794–1798'.

The contents consist of a leather-bound volume of plant descriptions, lettered on spine 'DESCRIPTIONS OF PLANTS 1794–1798'. Contains 843 folios.

My research on this manuscript has been carried out mainly using a photocopy of the entire volume which was made in the early 1980s and which, with a photocopy of the 1800 diary, is now deposited in the library of the National Botanic Gardens, Glasnevin, Dublin. My thanks are due to Mrs Judith Diment, at that time Botany Librarian in the British Museum (Natural History) London (now

called The Natural History Museum), for making these copies available. I have also seen the original manuscript, and used it to verify some particulars for this paper.

B.93 "DESCRIPTIONS OF PLANTS 1794–1798"

Moore and Beasley (1997) were not the first authors to refer to this particular manuscript, and because the various descriptions of the manuscript differ, it is desirable to note previous commentaries.

Needless to say, in his biography of Robert Brown, Mabberley (1985) made use of B.93 which he referred to on several occasions in different ways. On page 28 Mabberley stated that "In the same year [1794], Brown began another book⁴⁴ of plant descriptions which are models of botanical meticulousness." Mabberley's endnote 44 on page 30 (which I will quote later) acknowledged B.93. Mabberley also used information from B.93 in the next chapter about Brown's service in the Fifeshire Fencibles, referring to the manuscript in endnote 5 on page 59 simply as "MS plant Descriptions – BM(NH)". Endnote 44 on page 30 needs to be quoted in full because it describes two different manuscripts –

Both the Botanic Garden MSS were salvaged for BM(NH) by James Britten, who wrote on the flyleaf of the double volume, 'They were found by me on Parsons' [sic] Bookstall in the Brompton Road in the sixpenny box in 1884'. This fortunate discovery may reflect the apparent confusion over Brown's papers, some of which were presented to Bloomsbury by Mrs Bennett, the rest (the 'Botanical Correspondence') going to South Kensington with the collections in the 1880s. Some papers and books were long uncatalogued and kept in the Keeper's Room, whence, it would appear, these two volumes escaped.

It is possible to reconcile Mabberley's account of "the Botanic Garden MSS ... [in] two volumes" by referring to page 22 where he wrote that "In 1792, Brown started writing out descriptions of plants in the old Edinburgh Botanic Garden, as well as collecting fungi in the Edinburgh area, many of them probably new records for Britain, giving them manuscript names". This is a clear reference to another manuscript volume, **B.13** of Moore and Beasley (1997), which bears the title "R. BROWN DESCRIPTIONS 1792—, HIGHLAND JOURNEY, 1793", and which contains "descriptions of plants in the Edinburgh Botanical Gardens or found in the neighbourhood May 1792" (Moore and Beasley, 1997). The second of Mabberley's two "Botanic Garden MSS" volumes is B.93.

In Bridson, Phillips and Harvey (1980), Robert Brown's manuscripts are briefly listed under number 229.286; "descriptions of plants, 1794–98" corresponds to B.93, while "descriptions 1792–93" corresponds to B.13 (which does not contain any references to Ireland or Irish plants.)

Mabberley, in end note 44, quoted from James Britten's signed annotation on the verso of the front right-hand endpaper of B.93, but by not quoting the entire annotation Mabberley has made a confusing account even more confused. Unfortunately Britten's inscription has recently been removed from this volume, presumably when conservation work was carried out. It was written in pencil and read (Figure 1):

This volume contains the two referred to in Journ. Bot. 1888, 285. They were found by me on Parsons's book-stall in the Brompton Road, in the sixpenny box in 1884.

Britten (1888), reviewing the recently issued *Flora of the North-east of Ireland* by S. A. Stewart and T. H. Corry, for the *Journal of Botany*, wrote as follows:

Mr. Stewart does not seem to be aware that Robert Brown during his residences in Ireland in 1797 and 1800, paid much attention to the botany of the districts in which his regiment was stationed. I was fortunate enough to pick up on a book-stall, four years ago, two folio volumes containing most minute and careful descriptions of 406 species of plants, originally drawn up by Brown and subsequently transcribed by him. [Present author's italics]

Taken together, Britten's manuscript annotation and his published comments indicate that the two folio volumes he obtained from Parsons' book-stall were soon bound into a single volume. This must have happened during his lifetime, and most probably during his employment in the Botany Department of the British Museum (Natural History) from where he retired in 1909; he died in 1924.

Thus Mabberley's statement that "Both the Botanic Garden MSS were salvaged for BM(NH) by James Britten" confuses Britten's "two folio volumes" (later bound in one, i.e. B.93) with the B.13 (also titled "Descriptions of plants ...") plus B.93. There is no evidence that Britten purchased B.13, for had this also come from Parsons' book-stall in 1884, Britten would surely have written in 1888 that he had bought three volumes.

Britten (1888) himself made some confusing remarks. He described the two folio volumes as "containing most minute and careful descriptions of 406 species of plants" (Mabberley (1985: 35) repeated this assessment). But, as this paper clearly demonstrates, B.93 contains descriptions of many more than 406 plants – the database on which I have recorded all the descriptions has exactly 1,020 entries for descriptions (as well as entries for other items that are not descriptions: three indexes, three letters, and an extract from a publication by Persoon) while the

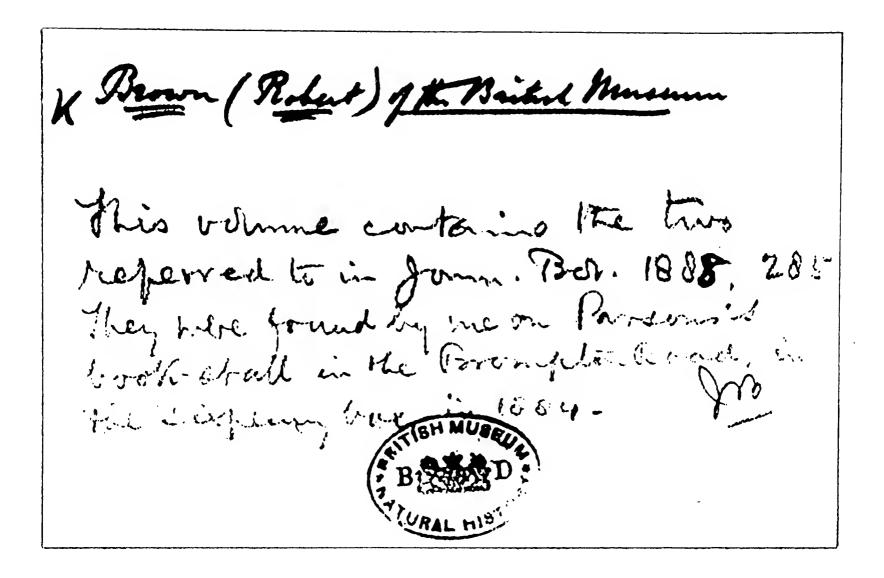


Figure 1

James Britten's annotation in **B.93**, in pencil, reproduced from the photocopy made in the early 1980s. (electronically enhanced)

This inscription is no longer to be seen in the bound volume in The Botany Library, The Natural History Museum, London. (see text, page 117)

(© The Natural History Museum, London)

index to plant names (see Nelson, 2003a) contains 944 entries. Even allowing for duplicate descriptions there are not less than twice as many species described in B.93 as stated by Britten (1888). Why and how did he compute 406? The explanation seems to be that he added 169 and 237, but to understand where he obtained these numbers it is necessary to explain in more detail what B.93 contains.

Detailed description of B.93

B.93 is not a single, integrated volume composed of uniformly cut and trimmed pages. It is a miscellaneous gathering of folios that clearly were never originally in, nor were they taken from, a single volume. In this instance it is a great pity that Britten's description is so vague, because there is no way now of telling what comprised the two folio volumes found on Parsons' book-stall.

Having been through this volume page by page, I can attempt to reconstruct the miscellany of original manuscripts which were gathered into this volume after Britten purchased them. It should be noted that the page numbers which are used here must have been added after the folios were bound into the single volume. It must also be stressed that some pages were not numbered and there are several instances of repeated and omitted numerals, so that the final page number 843 does not equal the actual number of pages; Moore and Beasley (1997) mistakenly stated that B.93 contains 843 *folios*, i.e. 1,686 pages.

The following distinct separate 'fascicles' can be recognized within B.93:

(A) Pages 1–68: the pagination is erroneous because number 58 was skipped (57 is followed by 59). The page numbered 68 is really the sixty-seventh, but the final page of this 'fascicle' is blank and was not numbered. In the top right-hand corner of page 1 someone, most likely Brown himself, has written "Part I 46". On page 68 there is an index to the descriptions, in Brown's handwriting. "Part I" contains 97 descriptions, each of which is numbered with an Arabic numeral, and all are written in Brown's neat handwriting.

The manuscript index tallies with the 97 descriptions, but Brown himself miscounted the pages and omitted to use number 29 (he did not write the page numbers on the folios himself), so his pagination (like the modern one) is one out.

(B) Pages 69–161: the pagination is correct except for the last page, the verso of page 161, which is blank and is not numbered. This 'fascicle' thus comprises 94 pages. Brown himself wrote "Part II" on the first page (69) and also numbered the pages up to 65 (page number 133 of the volume), and on last page (161) again provided an index that corresponds to the section. The descriptions bear a

sequence of Roman numerals from I to XCI. (The total number of descriptions to page 161 is thus 188.)

(C) Pages 162–260: the pagination is unusual because the first and all subsequent right-hand pages (folio recto) have even (not odd) numbers. However it is correct except for the last page, the verso of page 260, which is blank and is not numbered. Brown wrote "Part III" on the first page (162). An unusual feature of this 'fascicle' is that the leaves comprising pages 234–260 are substantially longer than those of the preceding pages, but there does not appear to be any discontinuity in the text between page 233 and page 234.

Again the descriptions are numbered with Roman numerals, but because Brown used XLII twice, "XLII Adoxa Moschatellina" (page 194) and "XLII Saxifraga sarmentosa" (page 195), there is one more description (i.e. 171) than the final numeral (CLXX) suggests. (The total number of descriptions up to page 260 is thus 359.)

(D) Pages 261–597 comprise a miscellaneous collection of folios, of different shapes and sizes, which must have come from different sources. It is difficult to detect sub-groups of folios using the photocopied pages, although a thorough examination of watermarks, paper colour and texture, page dimensions, and patterns of damage in the original should allow separate clusters of leaves to be distinguished. A brief examination of the original manuscript showed that, for example, pages 350a–401 appear to form a discrete section, as do pages 405–497.

The following need to be noted: page 309 recto has recently been numbered 308a (this number was not on the photocopy I used); page numbers 402, 403, 404, 510 and 511 seem to have been skipped because there do not appear to be missing folios; pages 276, 342, 442, 470, 474, 508, 535, 543, 575 and 587 are blank.

Among the leaves is one (pages 596–597) which must have come from a lost manuscript containing at least 71 pages bearing descriptions of at least 99 cryptogams, because there is a fully numbered index written on the lower part of page 596.

Among the descriptions in this miscellany of folios are Brown's notes (pages 394, 568–571) on a collection of marine algae from Barbados, collected during 1797 by the Scottish physician Dr. William Wright F.R.S. (1735–1819). Brown examined these specimens on 13th August 1798 during a visit to the British Museum, London (Mabberley, 1985: 40).

(E) Pages 598-621: the pagination is unusual because the first and all subsequent right-hand pages (folio recto) have even (not odd) numbers. The 24 pages contain descriptions of Scottish cryptogams, some of which came originally from Dr.

Archibald Menzies' herbarium (pages 619-620); these were not specimens gathered during Menzies' overseas voyages.

- (F) Pages 622–843: the pagination is a little awry. There are two folios numbered 738, but the number 758 was not used so by page 759 the pagination is in step again. Once again, Brown himself numbered (using Arabic numerals) each description. He used number 44 twice, for *Teucrium fruticans* (page 665) and for *Veronica anagallis* (page 667), so there is one more description (i.e. 238) than the final numeral (237) on page 843 suggests. Combining A, B, C and F (see discussion below), the total number of plants descriptions in these 'fascicles' is 597.
- (G) Hand-written index to the names in the volume; 13 pages. This index has been written on what evidently were the blank pages at the end of 'fascicle' F because the paper is exactly the same, with the same watermarks (including the date 1794). However the handwriting is not Robert Brown's, and the index cannot have been compiled until this compilation of papers was completed. The handwriting has not been identified and may be that of one of the Museum's secretaries. The index contains a small number of errors in stated page numbers and a few names were omitted. All the same, it provided a valuable check-list against which I was able to check my database, and the index (published here) generated from it.

'Fascicles' A, B, C and F are similar in style, comprising neatly written, numbered descriptions. There is internal evidence that they represent some of the "volumes" into which Brown transcribed his plant descriptions. The clues are on pages 329 and 385 in the descriptions of *Milium paradoxum* and *Telephium imperati*. To the former description, Brown added "transcribed ... Adde & corige descripti No 174 Vol IV Mss Nost data", and on page 788 (which is within 'fascicle' F) the description of *Milium* is numbered 174. To the second, Brown added "desc in N 114 Vol IV Mss adden & corrig", and again on page 737 (which is also within 'fascicle' F) the description of the *Telephium* is numbered 114.

Robert Brown's Botanical Explorations

SCOTLAND 1792–1795

Mabberley (1985) accounts in some detail for the period of Brown's life covered by B.93, 1792–1800. During those nine years Brown was a student at the University of Edinburgh (1790–1793) but he abandoned his medical studies and in 1794 enlisted in the Fifeshire Fencibles, being commissioned Ensign on 20th October 1794 (the date on which the regiment was founded). The regiment was

ordered to Ireland, and so from May 1795 until December 1800, apart from several extended periods of leave when he was in Britain, Brown was stationed in various towns in Ireland.

The earliest dated descriptions included in B.93 are for plants gathered in 1792 (not 1794 as suggested by the spine inscription; see Moore and Beasley, 1997), and indicate that Brown was collecting plants at Burntisland and St. Andrews (Fifeshire) in August, on his way north to Invercauld House (Perthshire), as described by Mabberley (1985: 22–23). On Carn na Drochaide (2,681ft), near Braemar, during August he collected *Saussurea alpina* (BM). In September, Brown was at St. Cyrus, on the coast north of Montrose (his home town). In October he was at Pearsie, west of Montrose.

Brown returned to Edinburgh and his studies, and during the late winter and spring of 1793 he botanized in and around Edinburgh. B.93 includes descriptions of plants from the King's Park (January, March, May), Colinton (May), Salisbury Crags (May) and the Pentland Hills (April). As related by Mabberley (1985: 23–26), during the summer of 1793 Brown again went north via St. Andrews to Clunie (Perthshire) which he used as a base for forays into the glens and mountains. He collected in the River Isla valley. In early August, Brown and the Revd. William MacRitchie (see Mabberley, 1985: 24–25) walked west to Glen Lochay ascending "Malghyrdy" (Meall Ghaordie or Meall Ghaordaidh: 3,410ft) and then "Ben Teskerny" (Beinn Heasgarnich: 3,530ft). A few days later they were on Ben Lawers, before returning to Clunie. In September, Brown gathered *Lobelia dortmanna* in the loch at Clunie (BM). The diary of this botanical journey is in B.13 (Moore and Beasley, 1997). By October 1793 Brown was back in Edinburgh.

It is not known whether Brown had any gainful employment between abandoning his medical studies in 1793 and enlisting in the Fifeshire Fencibles on 20th October 1794 (Mabberley, 1985). That he remained in Edinburgh through the winter of 1793–1794 into the summer of 1794 is evident from the numerous plant descriptions in B.93 dated within that period. As in previous years, Brown obtained plants to study from the Edinburgh Botanic Garden and Dickson & Co.'s nursery, both situated on Leith Walk. In 1792, according to B.93, he had had access only to plants in the Edinburgh Botanic Garden (see Fletcher and Brown, 1970, for a history of this garden). Is it possible that he worked as a gardener during the interval between leaving university and enlisting? If this was what Brown did, it is very possible that he was employed in the Botanic Garden; in B.93 there are 269 dated descriptions for plants gathered there between October 1793 and 10th March 1795. That he had access to so many plants from the collections in the Leith Walk Botanic Garden suggests that Brown had favoured treatment, at least from the Principal Gardener, Robert Menzies, or that he himself worked there

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in some capacity. It might be that Brown worked in Dickson's nursery (see Henrey, 1975, 2: 399–400) because 78 dated descriptions show that Brown also had seemingly unrestricted access to the valuable stock plants in the nursery between April and October 1794, and in B.13 there are six descriptions made from Dickson's plants dated June and November 1793.

That Brown maintained contacts with Edinburgh gardeners during this interval between university and army is evident from other records in B.93. In June and July he obtained six plants from Andrew Leslie's nursery, which was situated in Broughton Park, Bonniton Road, Edinburgh (see Henrey, 1975, 2: 402–403). Private gardens also yielded specimens. Brown visited Morden in June 1794 and obtained eleven plants from the glasshouses there. From a Mrs Scot he obtained the Canary Islands broom, *Cytisus foliolosus* (= *Adenocarpus foliolosus*) (Mabberley, 1985).

Perhaps the most curious records are those from Dr. John Walker's garden at Colinton. Brown had enrolled for Professor Walker's natural history classes at the University of Edinburgh in 1792; the course of weekly lectures began in November and thus would have ended in May 1793 (Eddy, 2003). There is no indication in B.93 that Brown visited Walker's garden during that period, but he did go to Walker's garden in March, October and November the following year, 1794. On the later visits, he obtained specimens of four willows, three of which were exotic species that were labelled with names attributed to Walker – Salix argentea Walker, S. lucida Walker and S. ligustrifolia Walker. (When he was in Ireland, Brown maintained contact with Walker, sending him specimens on at least one occasion in 1800.)

In August 1794, Brown left Edinburgh for a botanical trip which included Cortachy, the River Isla, and Lochnagar, as well as Beinn a' Bhuird beyond Invercauld. He also managed to fit in, again in the company of the Revd. William MacRitchie, Ben Lawers, Meall Ghaordaidh and Beinn Heasgarnich, and B.93 contains a description of *Salix myrsinites* from "Craig oore in Breadalbane" (? = Creag Mhor: 2,359ft).

As Mabberley (1985) noted, Brown was back in Edinburgh in September 1794, continuing to describe plants from the Botanic Garden, Walker's garden and Dickson's nursery. The last, for the time being, descriptions from Dickson's collection were made in October. On 20th October Brown enlisted in the Fifeshire Fencibles which had its headquarters at Cupar ("Coupar" in Mabberley, 1985). If Brown was based at Cupar, a town in central Fifeshire about 40 miles (by road) from the centre of Edinburgh, he must subsequently have made several trips to

Edinburgh, where his widowed mother presumably still lived, because in November and December 1794, January 1795 and March 1795 he gathered specimens from the Botanic Garden, including *Indigofera* sp. on 30th December 1794 and *Glycine bimaculata* (*Hardenbergia monophylla*) on 10th March 1795, both from the "Dry Stove". The *Glycine* is the last specimen recorded in B.93 from Edinburgh Botanic Garden – although Brown was on sick-leave in Edinburgh early in 1797 this volume does not include any more descriptions derived from plants grown in the Botanic Garden.

Robert Brown passed through Girvan, en route to Ireland, on 8th May 1795 (Mabberley, 1985: 28) (see Table 1, pages 126-127, for the places where Brown stayed or was stationed during the succeeding six years). Brown served as a regimental surgeon in the Fifeshire Fencibles during his years in Ireland.

IRELAND 1795-1800

1795: Donaghadee, Londonderry, Limavady, Coleraine, Giant's Causeway

Soon after arriving in Ireland in May 1795, Brown was at Donaghadee, County Down, where he befriended a Mr. Arbuckle and obtained four exotic plants from his garden – plants named *Agapanthus umbellatus*, *Blechnum*, *Cactus pendula* (cf. Mabberley, 1985: 31–32) and *Cineraria lanata* are described in B.93. Mr. Arbuckle was undoubtedly the person referred to by Hincks (1829) as "the late Mr. Arbuckle, collector of Donaghadee" who also became acquainted with John Templeton in 1795 (Hincks, 1828: 405). Arbuckle and Templeton had "a frequent correspondence for some years", and together often visited the gardens of the Earl of Clanbrassil at Tollymore in Bryansford near Newcastle, County Down, and also near Dundalk, County Louth. Brown visited Lord Clanbrassil's Dundalk garden after breakfast on 15th July 1800, so he could not have been at Tollymore that day, as Mabberley (1985: 55) suggested.

On 6th August 1795, Brown travelled between Limavady and Londonderry – presumably his regiment was based in Londonderry for several months – because, according to B.93, he collected *Pinguicula lusitanica* that particular day "on a bog by the road side about half way between London-Derry & Newtown-Limavady ..." (the specimen is extant in **BM**, with original label; Mabberley, 1985: 31; Hackney, 1992). A specimen of *Apium nodiflorum* (**BM**, with original label reading "Sium, nodiflorum? repens At the Giants Causeway, Ireland Augt 1795 ..."), recently discovered by D. T. Moore, indicates that he also went to the Giant's Causeway that month, while a specimen of *Drosera anglica*, also dated August 1795 and labelled "In Bogs between Newtown-Limavady & Coleraine, Ireland ..." (**BM**,

with original label) (Britten, 1888) suggests Brown also visited Coleraine – Limavady and Coleraine are situated on the road which Brown would have taken between the Giant's Causeway and Londonderry.

Neither *Drosera anglica* nor *Apium nodiflorum* are described within B.93. In the latter case, the original label does bear the annotation 'Desc in Mss', whereas the *Drosera* label does not

It is notable that B.93 does not contain any dated descriptions for the fifteen months between 27th September 1795 (*Erodium moschatum*, "abundantly at the West end of the Suburbs of London-Derry": see Mabberley, 1985: 31) and January 1797. Does this imply that Brown was too busy with medical duties to have time to spare for botanical rambles, or is it merely a chance lacuna and Brown's botanical observation during these months were recorded in another, lost manuscript? Perhaps the absence of descriptions implies that Brown was confined to barracks, unable to ramble through the Irish countryside to gather plants?

1797: First records for County Antrim

In December 1796 Brown was granted sick-leave (Mabberley, 1985: 33) and travelled from Carrickfergus back to his home to Edinburgh. Presumably his regiment was based in Carrickfergus from the end of 1796 into the spring of 1797, because Brown returned there once his sick-leave had expired. As Mabberley noted (1985: 33), despite Brown's presumed ill health, he resumed his botanical activities while in Edinburgh during January and February 1797, describing 19 plants from Dickson's "Lieth Walk" nursery - Brown consistently misspelled Leith - and also making herbarium specimens (see Mabberley, 1985: 33). B.93 scripts do not indicate that Brown went to Edinburgh Botanic Garden, but show him studying Dickson's collection of Cape heaths, Erica species, from South Africa which were becoming increasingly fashionable, among other exotics. His descriptions include three nameless Erica species, and also Erica capitata, E. curviflora, E. parviflora, E. pubescens and E. ramentacea as well as the European species E. australis. Three specimens collected by Brown during December 1796 in Dickson's nursery have been traced in BM by D. T. Moore: Erica curviflora, E. ramentacea and E. cyathiformis (this has two labels, one with the name "Erica caffrariae" and the other with "Erica caffra" which correspond to the descriptions in B.93, pages 624–625).

Brown was back in Ireland before the end of March 1797 (Mabberley, 1985: 34) and, according to dated descriptions in B.93, he was based at Carrickfergus until July at least. On 6th April he gathered a seaweed on the local shore. On 13th

	1795	1796	1797	1798	1799	1800
January	Edinburgh		Edinburgh (29)	Ballintoy (23, 26)	Edgbaston	Londonderry (12–31)
February			Edinburgh		Dudley	Londonderry (1-28)
March	Edinburgh (10)			Leslie Hill, Ballymoney (19)		Londonderry (1–14, 17–31) Faun (14) Rathmullan (14, 15, 16) Macamish (15) Knockaller (16) Dunrea (16)
April			Carrickfergus (6–13)	Ballymoney (7) Carrickfergus (13)		Lifford (1) Strabane (2–3) Londonderry (4–30)
Мау	Ayr (6) Girvan (8) Donaghadec		Carrickfergus (30)	Carrickfergus (6, 9) Ballymena (7) Belfast (23–25)	London (14)	Londonderry (1–9, 21–24) Buncranna (9) Dunrea (10–21, 24–31) Knockurris (12) Buncranna (21)
June			Carrickfergus (16, 30) Belfast	London (15)	London (4)	Dunrea (1–7) Knockaller (1) Bulbin (3) Londonderry (7–30) Sharon (19) Cumber (30)
July			Carrickfergus	Brompton London (17)	Castleblaney (fide 1800 diary)	Londonderry (1–9, 23–31) Strabane–Newry (9–13) Newry (14) Dundalk (15) Slieve Gullion (15) Newry (16) Rostrevor (16) Carlingford Mountain (17) Baronscourt (22) Strabane (21–23)

Londonderry (1–7) Strabane (7) Omagh (8–11) Augher (11) Monaghan (12) Castleblaney (13) Ardee (14) Navan (15) Trim (16-17) Leixlip (18–24) Maymooth (24–28) Kilcock (28–310	Kilcock (1–3, 6–27) Dublin (3–5, 18–21) Glasnevin (4, 5, 19, 20) Lucan (5) Leixlip (5) Kilcullen (27–30)	Kilcullen (1–19, 25–31) Dublin (19–25)	Kilcullen (1–21) Dublin (21–30) Dargle Glen Luttrelstown	Kilcullen (1–18) Dublin (18–21) Chester (22)
Turnham Green (25)	London (3) Chelsea (11)	London	Bath (1, 25) Bradford-on-Avon (2) Worcester	Wolverhampton
Larne (7) Fairhead (30) Giant's Causeway	Ballantoy (21, 28) Ballycastle (22–24) Brochy (29) Ragherry Island Giant's Causeway	Ballintoy (1–3) Ballycastle	Ballintoy	Ballintoy (1) Whitepark Bay (20)
Lisbum (fide Mabberley, 1985: 31)				Carrickfergus Edinburgh (sick leave)
Limavady-Coleraine (Drosera BM) Londonderry Giant's Causeway (Apium BM)	Londonderry			
August	September	October	November	December

Table 1

Places where Robert Brown is known to have stayed or been stationed, with dates, 1795-1800.

Numerals in brackets after place-names are the dates recorded in his manuscripts; thus he was in Edinburgh on 29th January 1797.

Dates based on specimens are also included: BM indicates that the specimen is in the

Botany Department, The Natural History Museum, London.

April he found a moss which he identified as *Fontinalis alpina* "near the waterfalls about 2 miles from Carrickfergus". In May he noted that *Apium graveolens* grew "in the greatest abundance about Carrick Fergus" – this is a previously unpublished first county record for County Antrim (*cf.* Hackney, 1992). Other apparent first county records contained in B.93 for some of the less-common flowering plants of County Antrim are as undernoted:

Arenaria serpyllifolia - "near Carrick Fergus. May 1797".

Erodium moschatum - "near Carrick-Fergus July 1797".

X Festulolium loliaceum (as Poa loliacea) - "on Walls at Carrick Fergus & at the shore at Bally Castle 1797".

Parietaria judaica (as P. officinalis) – "on old Walls at Carrick-Fergus May 30th 1797". This predates the record quoted by Hackney (1992: 233) by fourteen years.

Umbilicus rupestris (as Cotyledon umbilicus) – "on the Castle Rock of Carrick-Fergus. June 30th 1797".

Zostera marina – "thrown on the shore at Carrick-Fergus June 1797". (Brown studied Zostera marina with his Cuff Compound Microscope – "Nulla rima mihi fuit obvia Lustrata lente N1 micros: Cuff" (page 815; see Figure 2).)

Brown also recorded Anagallis arvensis, Anthriscus caucalis (as Caucalis anthriscus), Carex remota and C. sylvatica, Crataegus monogyna (as C. oxycantha), Fumaria capreolata, Glyceria fluitans and Moehringia peploides (as Arenaria peploides) in Carrickfergus and its hinterland. As before at Donaghadee, he was welcomed by gardeners. Mr. Craig's greenhouse yielded four exotics including another unnamed Erica and, on 16th June, Mesembryanthemum hispidum (= Drosanthemum hispidum; see Mabberley, 1985: 34). Brown gathered Sweet Bay (Laurus nobilis) from the garden of Castle Dobbs, the seat of the Dobbs family (see Rankin and Nelson, 1990), a short distance outside Carrickfergus.

On 7th August Brown botanized at Larne, noticing Sagina maritima for the first time (see below). Other descriptions within B.93 indicate that by late August 1797 Brown and his regiment had been moved to the extreme northeast of County Antrim, to Ballycastle or Ballintoy. All the plants Brown gathered and described between 30th August 1797 and 26th January 1798 originated from Ballycastle and Ballintoy and their neighbourhoods. Fully-dated scripts exists for these localities: Fair Head (30th August), Ballintoy (21st and 28th September, 1st December 1797, 23rd and 26th January 1798), Ballycastle (22nd and 24th September), Brochy (29th September), and Whitepark Bay (20th December). He also visited the Giant's Causeway again.

201 Zostera marina

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Spender linearis membranaceus marquibus inflexio

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Figure 2

Robert Brown's manuscript description of Zostera marina. (from **B.93**, page 815) (Reduced × 0.8 approx.)

Note the reference to the Cuff Compound Microscope. (third line from end)

(© The Natural History Museum, London)

Among plants Brown studied, and described in B.93, from this part of County Antrim are:

Blysmus rufus (as Schoenus rufus) – "in salt marshy ground occasionally coverd at high water near Ballantoy Sep^r 1797" (see Britten, 1888; Hackney, 1992: 343).

Cakile maritima (as Bunias cakile) – "on the beach at Ballantoy Sep^r: 1797" (see Britten, 1888; Hackney, 1992: 133).

Centaurium erythraea (as Chironia centaureum) – "about Bally-Castle Sep^r: 1797".

Gentianella campestris (as Gentiana campestris) – "in the neighbourhood of Bally Castle Sep^r 1797".

Hymenophyllum wilsonii (as H. tunbridgense) – "Brochy Sep^r 29 1797".

Jasione montana – "in the vicinity of Bally Castle Sep^r 1797".

Lavatera arborea – "on the shore at Ballantoy & grows also abundantly in the Sheep Island about ½ mile from Ballantoy shore – Sep^r: 1797" (Britten, 1888; Hackney, 1992: 162).

Samolus valerandi – "at the Giants Causeway Sep^r 1797" (Mabberley, 1985: 34).

Descriptions of Anthyllis vulneraria, Calluna vulgaris, Erica cinerea and E. tetralix, and Parnassia palustris also date from the late summer and autumn of 1797. Whenever he had an opportunity, but especially during the winter months when flowering plants are unavailable, Brown gathered and described cryptogams: at Whitepark Bay on 20th December 1797 he obtained several lichens.

1798–1799: Antrim, Belfast, (in England), Monaghan

Between 19th March and 25th May 1798, Brown's gatherings came from a variety of places, including Leslie Hill (a demesne situated a short distance to the west of Ballymoney), Ballymena, and Belfast (Mabberley, 1985: 36). He visited Mr. Craig's garden in Carrickfergus again in May. The first explicit indication of Brown's contacts with the renowned Belfast naturalist John Templeton (1766–1825) are descriptions of several exotic and native plants, including *Erica australis* and *E. tubiflora*, "Cistus calycinus" (Mabberley, 1985: 36) and Carex stricta ("cultivated in Mr Templetons Garden Orange Grove near Belfast, but found wild in the neighbourhood": see Britten, 1888), all dated May 1798. However, given the fact that Brown had met Templeton's friend Arbuckle at Donaghadee during May 1795, they may have met before this visit to Templeton's garden, which was also called Cranmore.

On 25th May Brown was at "the new barracks" in Belfast near which he gathered some *Berberis vulgaris* leaves on which he detected wheatrust, *Puccinia graminis* ("Aescidium berberidis"). *Berberis vulgaris* has not been reported from Belfast (Beesley and Wilde, 1997) nor from any other part of north-eastern Ireland

(Hackney, 1992) in recent decades, having been exterminated because it is a host of the pathogenic fungus which Brown recorded.

Brown apparently spent most of the rest of 1798 in England (Mabberley, 1985) - whether he took part in, or attended in his capacity as an army surgeon, the Battle of Ballynahinch on 12th and 13th June 1798 cannot be ascertained. Among the government forces which engaged about 5,000 troops loyal to the Society of United Irishmen, was Brown's Fifeshire Regiment of Fencibles. Brown could have left Ireland after this engagement and still reached London by 2nd July (when he collected mosses in the vicinity of Greenwich, Hampstead and Woolwich). Until mid-October 1798 he was based in London, frequently visiting gardens and nurseries: Chelsea Physic Garden, the Royal Gardens at Kew, the British Museum's somewhat decrepit garden at Montagu House, William Curtis's botanic garden at Brompton, Robert Teesdale's garden at Turnham Green, and Colvill's nursery on King's Road, Chelsea. By 1st November 1798 he was with a regimental recruiting party in Bath where, on 25th November, he called on William Sole, author of a book about mints (Mabberley, 1985: 43). The recruiting party proceeded into 1799 - in January Brown was at Edgbaston, and on 19th February he collected a moss on the ruins of Dudley Castle. Mabberley (1985) reported that Brown was in London again by 14th May. On 4th June he visited the Linnean Society.

Brown was back in Ireland in July 1799 (Mabberley, 1985: 46). When he was at Castleblaney, County Monaghan, more than a year later on 13th August 1800, Brown wrote the following in his diary (B.12, page 90) regarding Shoreweed: "Littorella lacustris in the greatest abundance on the stony margin of the lake – observd there July 1799".

Nothing else is presently known about Brown's military or botanical activities during 1799. Mabberley (1985: 44) indicated that Brown went to Ballycastle and collected *Sagina maritima*. There is no reliable evidence for a return to Ballycastle because, although the specimen of *Sagina maritima* in J. E. Smith's herbarium is dated 1799, that is more likely to be the date of acquisition by Smith than the date of collection by Brown (J. Edmondson, pers. comm., 28th August 2003). Another of Brown's specimens in Smith's herbarium, labelled *Conferva phoenicea*, is also dated 1799: it was collected "from a lime-stone cave on the north coast, near the Giant's causeway, Ireland". None of the descriptions in B.93 indicates that Brown collected at Ballycastle after October 1797. His description of *Sagina maritima* (B.93, pages 793–794), which is clearly dated September 1797, reads: "Description from plants growing in bare spots by the Sea side at Bally-Castle. Where it occurs in great abundance, flowering from July till Oct^r or Nov^r: observed also by the water edge at Larn in Aug^t 7th 97 – in this last place it grew mixd with

other herbage & the Stems were always solitary...". Perhaps Brown gave the two specimens to Smith when he visited the Linnean Society on 4th June 1799?

1800: Londonderry, Donegal

For 1800, Brown's extant diary (B.12) provides a very detailed account of his activities, both military and non-military, between Sunday 12th January when Brown "Slept till about 9 O'Clock. At Breakfast {between 10 & 11 O'Clock} read a few pages of Ventenat's Discours Preliminaire sur L'Etude De Botanique in his Tableau de Vegetal. ...", and Sunday 21st December when, after breakfast with Dr. Robert Scott (see Nelson, 1998), Brown " ... repacked my trunks [and] took my passage along with Kerr in the Parkgate packet saild from the Pigeon house [Dublin] at half after two PM ...".

B.93 contains description of plants collected by Brown at various localities in Ireland between 26th May and 7th November 1800 – these sometimes compliment, sometimes augment, records in his diary. For example, in June 1800 Brown was based at Dunree fort on the Inishowen Peninsula, County Donegal. According to his diary, on 3rd June he "Rose half past 6 – ... After an early breakfast {half past 8} walkd to a mountain call'd Bulben about 5 miles from the Fort, & returnd about 7 oClock. for a pretty numerous list of plants found – see my 12^{mo} common place book ...". Unfortunately the whereabouts of this commonplace book is not known and it may not be extant, so the "pretty numerous" list is not available. However, there are 21 descriptions in B.93 based on plants from Bulben Mountain (which should not be confused with Ben Bulben in County Sligo):

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Bartramia pomiformis (page 552)
Bryum acutum (page 557)
Bryum sp. aff. elongatum (page 541) ‡
Bryum sp. (page 544)
Bryum zeirii (page 550) ‡
Byssus aurea (page 544) ‡
Carex rigida (page 447) ‡
Hypnum pulchellum (page 549) ‡
Hypnum sp. (page 541)
Hypnum undulatum (page 542) ‡
Jungermannia concinnata (page 558)
Jungermannia jubacea (page 559)
Jungermannia macrorhiza (page 547) ‡
Jungermannia radicans (page 551) ‡
Jungermannia spp (pages 547, 551, 558)
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Pohlia elongata (page 540) ‡
Polytrichum alpinum (page 556)
Salix herbacea (page 448) ‡
Saxifraga oppositifolia (page 449) ‡
Splachnum sp. (page 548)
Trichostomum fasciculare (page 552).

In his diary entries for 4th and 5th June Brown noted that he had written descriptions of some of the Bulben plants; those which can be matched clearly with diary entries are marked ‡ in the above list (N.B. the names in the list have not been updated). Ordered late at night to return to Londonderry the next morning, Brown had to pack all his specimens and books quickly, and he left Dunree early on 6th June. His botanical work was disrupted and there are no later entries referring unambiguously to Bulben plants.

While at Dunree, Brown discovered Irish Spurge, *Euphorbia hyberna*, growing by the "Riverside about the Mill of Dunrea abundantly in flower – May 26th – described 27th 1800" (Britten, 1888). Brown's manuscript description is in B.93 (page 436, as *Euphorbia hibernica*), along with descriptions of eight other plants which he had collected in the area, including the following:

Carex pulicaris – "Near Dunrea May 30th describd 31st".

Lysimachia nemorum – "Near Dunrea – Describd June 2^d 1800".

Melampyrum "pratense? sylvaticum?" – "Mountainous pastures. Banks of the small River about half a mile above Dunrea Mill – May 31st 1800 Describd June 2^d".

Sedum roseum (as Rhodiola rosea) – "Cliffs near Dunrea towards Urris May 27th in flower".

A more detailed account of Brown's Irish work during 1800 will accompany the transcription of his diary. Suffice it now to note some records contained in B.93 for County Londonderry:

Festuca altissima (as Poa sylvatica) – "In a small glen by the side of the new Road between Derry bridge & Prehen. First observ'd June 22^d since July 1st & 4th ... 1800". (Hackney (1992: 358) noted Templeton's report of this grass from Ness Glen, but Brown undoubtedly found it first and showed it to Templeton when they went to the glen together on 30th June 1800, as recorded in Brown's diary.)

Listera ovata (as Ophrys ovata) - "Prehen June 22d ... 1800".

Platanthera bifolia (as Ophrys bifolia) - "Near Prehen July 4 ... 1800".

Selaginella selaginoides (as Lycopodium selaginoides) – "Boggy ground at the Salmon Fishery near Derry July 28th ... 1800".

1800: Kildare, Dublin

Brown's next base was County Kildare (see e.g. Bowering, Reilly and Whittaker, 1995). He marched from Londonderry with his regiment on 7th August 1800, reaching Leixlip on 18th August, and stopping overnight *en route* at Strabane (7th August), Omagh (8th–10th August), Augher (11th August), Monaghan (12th August), Castleblaney (13th August), Ardee (14th August), Navan (15th August) and Trim (16th–17th August). He recorded a few plants during this march, but only had the opportunity to describe *Isoetes lacustris* in B.93. The following, recorded in Brown's diary (B.12), are the records from counties Monaghan and Meath:

Monaghan

Isoetes lacustris - Lough Muckno, Castleblaney: "thrown on Shore abundantly in fruit".

Littorella lacustris – Lough Muckno, Castleblaney: "in the greatest abundance on the stony margin of the lake – observd there July 1799".

Molinia caerulea (as Melica caerulea) – Lough Muckno, Castleblaney: "marshy ground side of the lake but not common".

Nymphaea alba - Lough Muckno, Castleblaney: "abundantly in the lake".

Meath

Ballota nigra – Trim: "near the former [Verbena officinalis]".

Ranunculus lingua – Ardee: "in Ditches at the end of the town".

Verbena officinalis – Trim: "Road side near the town ...".

Between August and December 1800, when Brown left Ireland, the counties of Kildare and Dublin were his collecting grounds. Since no Flora of Kildare has ever been published, first records are impossible to assess. County Dublin, in contrast, has a well-recorded flora, but B.93 contains only one description of a wild-collected flowering plant, *Clinopodium ascendens* (as *Melissa calamintha*). Brown collected it by the "Road side between Lucan & Chapel Izod Sep^t 3rd & 5th 1800" – this is most probably the same locality (on the so-called Strawberry Beds road) where it was first observed in 1730 and where it still grows (Doogue *et al.*, 1998: 295). The other Dublin plants noted in B.93 are three exotic species of grass which came from the Dublin Society's Botanic Gardens, Glasnevin.

The latest dated description in B.93 is of "Bryum viridissimum Dicks Fasc IV ... Castle Martyn Nov^r 6 describd 7th". As explained by Mabberley (1985: 58), Brown was a major and unacknowledged source of the bryophyte species described in James Dickson's *Fasciculus Plantaum Cryptogamicarum Britanniae*: four fascicles were published, the first in 1786 (see also Henrey, 1975, 2: 379). Brown

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himself helped prepare fascicle IV (see Mabberley, 1985: 57), which contained the protologue of the moss *Zygodon viridissimus* (Brown's "Bryum viridissimum"), an epiphyte on *Sambucus nigra* (elder). The type specimen of this species was collected by Brown at Castle Martyn, Kilcullen (Dickson, 1801). Brown noted this moss in his diary on several occasions. On 4th October 1800, in the afternoon after the 4.0 p.m. parade, he "Went to Castle Martyn Bryum viridissimum Dicks: Fasc IV on trees abundantly but only one tuft with fructification & that imperfect – it is the same species sent by M^r Templeton No 3". He looked again the next day: "Bryum viridissimum abundantly but hardly any with fructification ...". Later that day he "reexamin'd Bryum viridissimum & added to my former description". Persistence was eventually rewarded:

Nov^r 6th – gatherd several specimens of Bryum viridissimum Dicks. Fasc IV in the Orchard of Castle Martyn with deoperculated capsules The mouth is considerably contracted the rims thickened & in all the specimens examind nakd & at the same time regular & even. hence I am inclind to refer it to Gymnostomum

The contemporary references to Fascicle IV of Dickson's work in Brown's diary – they are not later annotations – indicate that Brown was already engaged in writing the description of the moss for publication in that work.

BROWN'S MANUSCRIPT NAMES IN **B.93**

B.93 contains manuscript descriptions of at least 23 plants which Brown considered at the time were new, unnamed species, and to which he applied names of his own. He signalled these by appending "N.", "Nost." or "Nostri" (our). The plants he provided with manuscript names were the following (the list is provided for its historical importance, and it is not the intention of the present author to publish these names in contravention of the *International Code of Botanical Nomenclature*).

- Aescidium epilobiae Nost (page 284): "in dorso foliorum Epilobiae roseae in Horto D. [William] Curtis".
- Bryum falcatum [Nost.] (pages 604-605: [Corrigenda] ad descriptionem page 525): "Hab^t in terra nuda atra turfoso in summis Montibus Benteskerny, & Malghyrdy ...".
- Bryum velutinum Nostri (page 525): [corrigenda only, the main description is not in B.93].
- Byssus bicolor Nos^t: ... affinis Bysso spongioso Nos^t (page 596): "Hab^t in spelaea ad littus prope Ballantoy comitatus Antrim Nov^r 1797 ...".
- Cerastium quadrifidum Nos^t (pages 459–460): "Walls about Derry common June 29th 1800 –".

Conferva flexuosa Ulva capillaris Nos^t (page 274): "Locus Carrickfergus May 1798".

Conferva innata Nos^t (pages 274–275): "see my dried plants left at Belfast".

Epilobium laevigatum Nos^t Epilobium alpestre Schnidt Bohem: (pages 824–825): "plants cultivated in Mr Curtis Garden from roots sent by M^r G Don who found it on Ben-Lawers about the same time with myself {1793}".

Fucus tomentosus? F alcgonoides Nos^t (pages 576–577): "in a small pool left by the recess of the tide among the limestones shelves near Bally Castle Sep^r 24th 1797".

Lichen incandrilis N [Nos^t] (page 581): "on a wall along with Endocarpon of Hedwig near Ballantoy Dec^r 1 1797".

Lichen niveus Nos^t L. varianus A Davis. (page 585).

Lichen pulchellus Nos^t (page 585): "On Limestone rocks in White Park bay Dec^r 1797 RB nova certe species".

Lichen pulverulentus Nos^t (page 324v): "on stones near Ballantoy by the road side Sep^r 28th & Oct^r 1st 1797".

Lichen zonalis bimorphis Nos^t (page 582): "on walls near Ballantoy Dec^r 1st 97".

Sagina maritima Nos^t (pages 793 – 794, 480): "plants growing in bare spots by the Sea side at Bally-Castle. Where it occurs in great abundance, flowering from July till Oct^r or Nov^r: observd also by the water edge at Larn in Aug^t 7th 97 – in this last place it grew mixd with other herbage & the Stems were always solitary – Sep^r 1797 ..."; "Shore below Prehen Aug^t 5 describd 6th 1800".

Scirpus littoreus Nos^t (page 823): "plants gatherd in green spots occasionally under water at full tide on the Ballantov shore. It was in seed Sep^r 21st 1797".

Sertularia arcuata Nos^t (page 590): "Specimen [?] in Littore prope Ballantoy Januario menso 1798 lectum".

Sertularia castanea Nos^t (pages 588–589): "priori affinis & cum eo lecta [... in Littore prope Ballantoy ejectis Januar: 1798]".

Spongia trapeziformis Nos^t (page 595): "On the stem Fucus digitalis at Ballantoy salt works January 26th 1798".

Trichia ilicis Nos^t an T. globulifera With? (page 564).

Trichostomum curtum Nos^t addenda ... April 1800 (page 555): "on a stone near the mill about a mile & half from Derry on the Road to Sharon June 19th describd 20 [1800]".

Ulva fasciculata Nostra a U fasciculata Walker D[?]sa sed affinis (page 572): "Sep^r 1797 Bally Castle ... examinem revolcata July 1798 Londini".

Ulva simplicissima Nostra U fistulosa Huds? (page 573).

Of the names noted, one, *Sagina maritima*, was subsequently published but not with Brown's name appended as the authority. In 1810, George Don named and described the species in *Herbarium Britannicum* fascicle VII employing the same binomial that Brown had used (Britten, 1888; Mabberley, 1985). Whether Brown's description was used by Don remains to be investigated.

Discussion

While many of Robert Brown's extant manuscripts are notoriously difficult to decipher, many of the pages (perhaps the majority) comprising B.93 are clearly and neatly written in ink and can be read with ease. The more daunting aspect of B.93 is it size and chaotic composition. Further detailed research will be required to disentangle the central section of the volume. The indexes (Nelson, 2003a and 2003b) appended to this paper provide access to plant names and localities, and should allow a more comprehensive assessment of Brown's work on the floras of his native Scotland and, especially, of Ireland. His work in Ireland is still largely unaccounted for in published histories of Irish botany (but see Nelson 1987, 1992, 1994, 1995).

Britten (1888) claimed that the two folio volumes which he purchased and which later became B.93 contained descriptions of 406 plants. A plausible explanation is that he took the number of the last species entry (CLXX) in 'fascicle' C (as defined earlier), and the number (237) of the last entry in 'fascicle' F and added them together. However, 170 + 237 = 407, not 406. It is possible to suggest an explanation for this discrepancy. If the final leaf of the volume containing, and ending with, 'fascicle' C was loose or misplaced, he would have read CLXIX as the number of the final description, and 169 + 237 does make 406. This suggests that the second folio volume ended with F. It is possible that later, during binding or restoration work on B.93, the loose leaf with CLXX was restored to its proper place. Even so, it is hard to explain why Britten did not realise that the manuscript volumes which he had rescued contained many more than 406 species descriptions.

There is nothing within B.93 which post-dates 7th November 1800 (a description of *Bryum viridissimum*, pages 532–533), no evidence that Brown annotated the descriptions after 1800, and no evidence that he brought these papers with him on HMS *Investigator*. It is likely that he left these notes in safe-keeping, perhaps with his herbarium specimens. After he returned home in October 1805 he may never have consulted them.

One possible account of the history of the manuscripts in B.93 between December 1800 and October 1805 is this. As soon as Brown received Sir Joseph Banks' letter "offering to recommend me to the situation of naturalist in an expedition fitting out for [sic] explore the unknown parts of New Holland", he wasted no time – his diary entries suggest he could not get to London quickly enough. On 18th December 1800 "Packd up my cloaths books &c &c sold every thing Regimental that I could dispose of" and next day left Kilcullen for Dublin. Brown spent 20th December in Dublin seeing his friend, Professor Robert Scott,

and also Dr. Whitley Stokes. On 21st December he breakfasted with Scott and before heading for the packet for England "repacked my trunks", apparently at Scott's house. It is known that Brown left with Scott his violin, a microscope and some books (perhaps including his manuscript note-books) which were packed into a box (Nelson, 1998). Brown was not in any hurry to retrieve these items after his return from New Holland in October 1805, and did not apparently even contact Scott. Scott wrote to Dawson Turner and James Sowerby early in 1806, asking if they had seen Brown since his return. To Turner, Scott commented: "It appears to me a little extraordinary that I have not heard from him, considering the intimacy between us previous to his voyage ..." (see Nelson, 1998: 123). Scott died in September 1808, and during the following spring his widow wrote to Turner noting that "Mr Browne's [sic] books and some other articles belonging to him I wish him to have, a microscope and a violin. The books have been packed up in a box by his own direction more than eight years. I am sure they are perfectly safe as they have been constantly in a dry room ..." (original ms in Dawson Turner correspondence, Trinity College, Cambridge). Brown visited Dublin, en route to Edinburgh, in July 1810 and presumably met Mrs Scott (Mabberley (1985: 175) stated Brown "saw Scott") and retrieved the box of books.

Irrespective of these matters, B.93 represents a remarkable collection of Robert Brown's botanical observations for the period before he embarked on HMS *Investigator*. He was a university student aged 19 when he composed the earliest of the descriptions contained in B.13 and B.93. These are often very detailed, extending to 50 lines or more and covering more than a single page, and sometimes (for example, *Alyssum halimifolium*, B.93 pages 3–4) including information about germinating seeds and seedlings. More remarkable, perhaps, is the fact that without exception the botanical details are in competent botanical Latin, recorded in a set pattern beginning with the calyx and the corolla and concluding with the source (usually, in B.93, in English) – "Description from plants cultivated in the Edin^r Botanic Garden December 1793", for example. These descriptions are indeed "models of botanical meticulousness" (Mabberley, 1985: 28). Did Brown learn his methods and botanical Latin at the University of Edinburgh, or was he self-taught?

Brown's botanical interests were catholic. His inquisitiveness led him to study not only native British and Irish plants but also exotics growing in garden glasshouses, and marine algae, lichens, fungi, mosses and liverworts were just as eagerly investigated as ferns and flowering plants – all these are represented in B.93. As we know, Brown became a superb microscopist – he had at least two microscopes, including (as mentioned earlier; Figure 2) Cuff's Compound Microscope, when he was in Ireland (Mabberley, 1985: 32, 34, 54–55) – and B.93 includes descriptions of microscopic organisms, such as hydrozoans and sponges, which are now placed in the Animal Kingdom.

It is worth commenting that while Brown most probably did not bring the manuscripts which form B.93 with him on the *Investigator* voyage, the descriptions indicate that he was not entirely unprepared for the extraordinary floras which he was to encounter in the southern hemisphere. He had examined at least a dozen different Cape heaths in the 1790s, and among the Australian species which are described in B.93 was *Leptospermum scoparium* (pages 406, 627) which Brown saw in January 1797 "in Mr Dickson's Nursery {Stove} Lieth Walk. Under the name of Philadelphus floribundus, from New Holland".

B.93 demonstrates Robert Brown's exceptional competence as a taxonomic botanist, capable from his student days of writing meticulous descriptions of the plants which he observed. The folios bound into this volume may not all be neatly inscribed, and when the handwriting is close to a scrawl we may be sure that Brown was writing as he observed a flower with his eyes, or a moss with a hand lens, or a lichen under a microscope. He was capable, when he had the time to spare, of transforming those hasty, rough notes into carefully polished descriptions. When he was a student and later an "industrious, single-minded" regimental surgeon, he had such leisure, but when working on board HMS *Investigator* in a "cramped and hot" cabin, suddenly confronted by countless new species of almost bewildering variety, Brown's meticulousness evaporated and his notes were then "carelessly written" (Mabberley, 1985: 87; Vallance, Moore and Groves, 2001: 10–11).

In conclusion, this gathering of manuscripts exemplifies the broadly based, early botanical interests, and demonstrates the already remarkably accomplished skills, of a young Scot who would eventually be lauded as "our *Jupiter Botanicus*" by Karl von Martius and, by Alexander von Humboldt, as "*Facile Botanicorum Princeps*" (Mabberley, 1985: 279, 378, 398).

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ROBERT BROWN'S MANUSCRIPT DESCRIPTIONS OF BRITISH AND IRISH PLANTS (B.93) (1792–1800), WITH INDEXES TO BOTANICAL NAMES AND PLACES

2. INDEX TO PLANT NAMES IN B.93

By E. CHARLES NELSON Wisbech, Cambridgeshire

2003

Robert Brown's manuscript B.93 (Moore and Beasley, 1997) contains descriptions, ranging from brief notes to extensive botanical descriptions, of about 1,000 plants (see Nelson, 2003a for full details of the manuscript). B.93 also contains the undernoted miscellaneous items:

Robert Brown's own indexes	68, 161, 596
Robert Brown's draft letters	419, 505-507, 519-521
Excerpta ab Observationibus mycologicis D Persoon	320

This index to the names of the plants described in B.93 includes only the principal names; names of species mentioned within the descriptions, for example for purpose of comparison, have not been included. The names have not been edited except for consistency (for example, the initial letter of the specific epithet is always rendered in lower case), nor updated. The names in **bold** are names which Brown himself signalled as his own names (see Nelson, 2003a, pages 135-136, for further details of these names).

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ROBERT BROWN'S MANUSCRIPT DESCRIPTIONS OF BRITISH AND IRISH PLANTS (B.93) (1792–1800), WITH INDEXES TO BOTANICAL NAMES AND PLACES

3. INDEX TO LOCALITIES OF COLLECTION, WITH PLANT NAMES

By E. CHARLES NELSON Wisbech, Cambridgeshire

Robert Brown's manuscript B.93 (Moore and Beasley, 1997) contains descriptions of about 1,000 plants collected at various localities in Scotland, Ireland and England, as well as from gardens (see Nelson, 2003a for full details of the manuscript). This index is divided into six sections:

English plants: native	pages 165-166
English plants: cultivated	pages 166-168
Irish plants: native	pages 168-171
Irish plants: cultivated	pages 171-172
Scottish plants: native	pages 172-175
Scottish plants: cultivated	pages 175-179

The plant names are arranged under each locality chronologically and then alphabetically.

The annotation "JB" provides a cross-reference to the page number in Jupiter Botanicus (Mabberley, 1985) where this plant or locality is mentioned.

ENGLISH PLANTS: NATIVE

Croydon, Surrey

No date Bryum 1798.03 Bryum

Dudley [*JB*: 43]

1799.02.19 Bryum [*JB*: 43]

Hampstead

1798.07.02 Dicranum cerviculatum
1798.07.09 Bryum cerviculatum

Henlaw [? Henley]

No date

Bryum

London: Battersea

No date

Fontinalis minor; Orthotrichum nudum

1798.08

Butomus umbellatus [JB: 39]

London: Battersea to Lambeth

1798.07.05

Phascum sphaerocephalon [JB: 38]

London: Greenwich to Woolwich

1798.07.02

Bryum heimii

London: Pimlico

1798.08.27

Cerastium aquaticum [JB: 39 Myosoton aquaticum]

Turnham Green

1798.08.25

Alisma damasonium; Limosella aquatica [JB: 39]

Yarmouth

No date

Fucus radiatus

1798

Fucus subfuscus

York

No date

Hypnum

Without locality

No date

Orthotrichum diaphanum

ENGLISH PLANTS: CULTIVATED

Bath: William Sole's garden, Trim Street [JB: 43]

1798.11.25

Asplenium ceterach

Croydon: [unnamed] garden

No date

Phascum curvisetum

London: Brompton: William Curtis's Botanic Garden [JB: 43]

No date Aescidium epilobiae; Erica margaritacea; Poa decumbens; Viola

amoena

Epilobium laevigatum [JB: 27 = E. anagallidifolium]

1798.07 Cunilla thymoides; Epilobium roseum; Hypericum dubium; Lamium;

Vicia laevigata; Vicia lutea;

1798.07.12 Arenaria media; Corrigiola littoralis; Herniaria glabra; Herniaria

hirsuta; Poa alpina; Veronica aphylla; Viola cornuta; Viola pilosa

1798.07.28 Bromus ciliatus; Bromus inermis; Bromus stipodes; Cinna

arundinacea; Cornucopiae cucullatum; Cynosurus; Cynosurus erucaeformis; Dactylis patens; Panicum glaucum; Poa; Poa

amboinensis

1798.08	Garidella nigellastrum; Verbena supina; Verbena urticaefolia; Viola
1700.00.04	montana
1798.08.04	Dactylis cynosuroides; Elymus canadensis; Elymus virginicus; Geranium malacoides; Geranium palustre; Geranium sibiricum; Oenothera hirta; Oenothera longiflora; Oenothera molissima; Oenothera purpurea; Oenothera sinuata; Panicum germanicum; Panicum hirtella; Uniola
1798.08.13	Amethystea caerulea; Bromus purgans; Erica hispidula; Panicum crus-galli; Panicum dactylon; Panicum viride; Polypodium dentatum; Polypodium ilvense; Oenothera grandiflora; Oenothera parviflora; Scutellaria alpina
1798.09.02	Elymus giganteus; Poa tenuiflora
1798.09.11	Isopyrum fumarioides
London: Chelsea: James	Colvill's Nursery, King's Road [JB: 39]
1798.09.10	Struthiola virgata
1798.09.11	Buchnera?; Diosma oppositifolia; Erinus?; Gnidia?; Leysera gnaphalodes; Mahernia pinnata; Mahernia verticillata; Manulea tomentosa; Passerina; Planta Papilionacea ex Nov. Hollandia; Polygala oppositifolia; Selago
London: Chelsea Physic	
No date	Aegilops ovata; Draba stellata; Oenothera molissima; Ornithopus; Oxalis corniculata? [JB : 27 = D . $norvegica$]
1798.07	Anagallis arvensis phoenicea & carnea; Buchnera capensis; Coronilla cretica; Erinus?; Euphorbia exigua; Lepidium subulatum; Lycium Japonicum; Vicia benghalensis
1798.07.03	Moeheringia muscosa; Stellaria scapigera
1798.07.05	Saxifraga hirculus
1798.07.09	Bellis annua; Campanula pulla; Erigeron; Gypsophila prostrata; Gypsophila saxifraga; Herniaria glabra?; Leontodon aureum; Lychnis alpestris; Polypodium regium; Scirpus; Teucrium pyrenaicum
1798.07.21	Gypsophila viscosa; Panicum sanguinale; Sideritis montana
1798.07.22	Polypodium auriculatum; Trifolium glomeratum?; Trifolium incarnatum?; Trifolium spumosum; Trifolium stellatum
1798.07.30	Celsia linearis; Lepidium suffruticosum; Psoralea pinnata
1798.07.31	Illecebrum sessile; Lantana africana; Lobelia pubescens; Lotus dorychnium; Melissa cretica
1798.08.	Athanasia dentata
1798.08.09	Athanasia dentata; Bellis?; Bellium?; Calendula; Chloranthus
	inconspicuus; Cynosurus aegyptiacus; Cynosurus aureus; Cynosurus indicus; Galega stricta; Hieracium fruticosum; Incestrum latibrosum; Justicia; Madia mellita; Pectis?; Plectranthus; Sigesbeckia oviculatis; Westringia rosmarinifolia
1798.08.18	Elymus tener?; Panicum verticillatum; Pelargonium gibbosum; Schoenus compressus; Taxus baccata; Telephium imperati; Tropaeolum minor; Vaccinium virgatum
1798.08.22	Itea spinosa; Lysimachia ephemerum; Psoralea bracteata; Tanacetum

1798.08.27	Cerastium aquaticum
1798.08.30	Gaura biennis; Panicum capillare; Teucrium botrys?
1798.09	Dictamnus albus
1798.09.11	Erinus?

London: [unnamed] garden

1798.08.12 Phaseolus vulgaris

London: Kew: Royal Gardens [JB: 39]

1798.08.25 Agrostis?; Ancistrum lucidum; Blaeria ericoides; Chelone formosa;

Ehrrharta; Erica versicolor; Gnidia spp; Houstonia purpurea; Justicia

spp; Zizania palustris

London: British Museum Garden, Montagu House [JB: 39]

No date Centaurea Isnardi [JB: 39 C. aspera]; Geranium aconitifolium?; Hieracium virgatum; Juncus niveus Milium paradoxum; Phyteuma orbicularis 1798.07 1798.07.26 Carex divulsa; Hieracium spicatum; Serapias palustris [JB: 39]

Epipactis palustris]; Lepidium graminifolium

Turnham Green: Robert Teesdale's garden [JB: 38]

Saxifraga moschata? No date 1798.07.11 Viola grandiflora

IRISH PLANTS: NATIVE

Ballintoy, Co. Antrim

, ,	
No date	Sertularia uva
1797.09	Bunias Cakile; Juncus uliginosus; Lavatera arborea; Schoenus rufus;
1797.09.21	Scirpus littoreus
1797.09.28	Lichen pulverulentus
1797.11	Byssus bicolor
1797.12.01	Lichen incandrilis; Lichen zonalis
1798.01	Sertularia arcuata; Sertularia castanea; Sertularia pinaster; Sertularia
	uva
1798.01.23	Sertularia tamarisca
1798.01.26	Fucus dentatum; Sertularia verticillata; Spongia trapeziformis

Ballycast

stle, Co. Antrin	
No date	Conferva; Fucus pinnatifidus; Schoenus albus
1797	Aira caerulea; Euphorbia helioscopia; Euphrasia officinalis; Juncus
	bufonius; Sedum anglicum
1797.09	Anthyllis Vulneraria; Chironia centaureum; Erica cincrea; Erica
	tetralix; Erica vulgaris; Gentiana campestris; Jasione montana;
	Parnassia palustris; Silene maritima; Statice armeria; Ulva
	fasciculata
1797.09.21	Utricularia minor

1797.09.22 Conferva

1797.09.24 Fucus dasyphyllus; Fucus tomentosus

Arenaria media; Orobanche major; Polygala vulgaris; Schoenus albus

Ballycastle to Carrickfergus, Co. Antrim

1797

Poa loliacea

Ballymena, Co. Antrim

1798.05.07

Carex pilulifera

Ballymoney, Co. Antrim

1798.04.07

Bryum striatum

Ballymoney, Leslie Hill, Co. Antrim

1799.01

Orthotrichum nudum

Belfast, Co. Antrim [JB: 36]

No date Fontinalis alpina; Rubus saxatilis; Sagina apetala

1798.05.23 Lichen exilis, Lichen muscicola

1798.05.25 Aescidium berberidis; Arenaria marina; Arenaria minor; Berberis

vulgaris

Belfast to Carrickfergus, Co. Antrim

1797.06

Carex remota; Carex sylvatica

Brochy, near Ballintoy, Co. Antrim

1797.09.29

Bryum; Hymenophyllum tunbridgense

Bulben Mountain, Inishowen, Co. Donegal [JB: 55]

1800.06.03 Bartramia pomiformis; Bryum spp; Bryum acutum; Bryum zeirii;

Byssus aurea; Carex rigida; Hypnum sp.; Hypnum pulchellum; Hypnum undulatum; Jungermannia spp; Jungermannia concinnat; a Jungermannia jubacea; Jungermannia macrorhiza; Jungermannia radicans; Pohlia elongata; Polytrichum alpinum; Salix herbacea; Saxifraga oppositifolia; Splachnum sp.; Trichostomum fasciculare

Carrickfergus, Co. Antrim [JB: 34]

1797	Alopecurus arvensis
1797.04.06	Fucus pinnatifidus: Fucus pygmaeus
1797.04.13	Fontinalis alpina
1797.05	Fucus verticillatus; Arcnaria serpyllifolia; Apium graveolens
1797.05.30	Parietaria officinalis
1797.06	Caucalis Anthriscus; Crataegus oxycantha; Festuca fluitans; Fumaria
	capreolata; Zostera marina
1797.06.30	Cotyledon Umbilicus
1797.07	Anagallis arvensis: Arenaria peploides: Erodium moschatum
1798.05	Conferva flexuosa

Castleblaney, Co. Monaghan [JB: 47]

1800.08.13

Isoetes lacustris

Chapelizod to Lucan, Co. Dublin

1800.09.03

Melissa calamintha

Bryum dealbatum

Donaghadee, Co. Down

No date

1800

Conferva

Dunree, Inishowen, Co. Donegal [JB: 46]

	2
1800.05.26	Euphorbia hibernica [JB: 55]
1800.05.27	Rhodiola rosea
1800.05.30	Carex; Carex pulicaris
1800.05.31	Melampyrum pratense
1800.06.02	Lysimachia nemorum
1800.06.03	Bryum turbinatum
1800.06.12	Polypodium cristatum

Fair Head, Co. Antrim

1797	Carex distans; Juncus campestris var. montanus
1797.08	Schoenus nigricans
1797.08.30	Spergula
1797.09	Spergula

Giant's Causeway, Co. Antrim

1797.09

Samolus valerandi [JB: 34]

Kilcock, Co. Kildare [JB: 47]

1800.08.30	Festuca pratensis; Galeopsis ladanum; Geranium pyrenaicum
1800.09.01	Phascum patens; Trifolium fragiferum
1800.09.07	Potamogeton pusillum
1800.09.10	Neckera heteromalla
1800.09.14	Dactylis glomerata
1800.09.15	Avena elatior; Phleum pratense
1800.10.05	Arundo phragmites

Kilcock to Maynooth, Co. Kildare

1800.09.16 Origanum vulgare

Kilcullen: Castle Martyn; Co. Kilare [JB: 50]

1800.10.04	Bryum viridissimum
1800.11.06	Bryum viridissimum

Larne, Co. Antrim

1797.08.07 Sagina maritima

Leixlip to Maynooth, Co. Kildare [JB: 47]

1800.08.20 Galeopsis ladanum

Limavady to Londonderry, Co. Londonderry

1795,08,06

2003

Pinguicula lusitanica [JB: 31]

Londonderry [JB: 46-47]

1795.09.27 Erodium moschatum [*JB*: 31]
1800.06.19 Trichostomum curtum
1800.06.29 Cerastium quadrifidum
1800.07.03 Vicia eracea
1800.07.04 Poa maritima
1800.07.25 Pinguicula lusitaniea

Londonderry, Boom Hall

1800.06.24

Scirpus palustris

Londonderry, Salmon Fishery

1800.07.28

Lycopodium selaginoides

Londonderry to Sharon, Co. Donegal

1800,06,19

Dicranum cerviculatum

Maynooth, Co. Kildare [JB: 47]

1800,08.20

Festuca pratensis

Ness Falls, Derry, Co. Londonderry

1800,06,30

Poa

Newtownstewart, Baronscourt, Co. Tyrone

1800.07.22

Lobelia dortmanna

Prehen, Londonderry, Co. Londonderry

No date
Bromus giganteus: Cochlearia anglica
Scirpus maritimus
Ophrys ovata; Poa trinervata
Ophrys bifolia
Poa trinervata
Poa trinervata
Festuca elatior; Phascum nitidum; Sagina maritima

Sharon, Co. Donegal

1800.06.19

Dieranum

White Park Bay, Co. Antrim

No date Lichen tricolor 1797.12 Lichen pulchellus 1797.12.20 Lichen exanthematicus

Without locality

No date

Bryum ealeareum; Bryum spp; Holeus lanatus; Orthotrichum

diaphanum: Pinguicula vulgaris

IRISH PLANTS: CULTIVATED

Ballymoney, Co. Antrim: Leslie Hill

1798.03.19 Ta

Taxus baccata

Belfast, Co. Antrim: John Templeton's garden, Cranmore, Malone [JB: 36]

No date

Centaurea jacea; Erica tubiflora; Erinus alpinus; Silene geniulata

1798.05

Carex stricta; Cistus calycinus [JB: 36]; Erica australis

Carrickfergus, Co. Antrum: Castle Dobbs

1797

Laurus nobilis

Carrickfergus, Mr. Craig's garden [JB: 34]

1797.06.16

Mesembryanthemum hispidum [JB: 34 Drosanthemum hispidum]

1797.07

Amaranthus bicolor; Erica

1798.05

Colutea frutescens

Carrickfergus garden

1797

Campanula speculum; Reseda undulata

Donaghadee, Co. Down: Mr. Arbuckle's garden [JB: 32]

1795.05

Blechnum

1795.05

Agapanthus umbellatus; Cactus pendula [JB: 31-32]; Cineraria

lanata

Dublin, Co. Dublin: Glasnevin: Botanic Gardens [JB: 55]

1800.09.04

Bromus inermis; Bromus pinnatus; Festuca cambrica

SCOTTISH PLANTS: NATIVE

Beinn a'bhuird (Grampions)

1794.08

Salix herbacea

Beinn Heasgarnich, Argyll [JB: 25]

1793.08

Bryum; Bryum falcatum; Carex globularis

Ben Lawers, Argyll [JB: 25]

1793.08

Bryum extinctorium \$; Bryum patens; Draba incana; Myosotis

scorpioides var. alpina; Poa alpina; Polytrichum hercynicum; Salix;

Salix reticulata

Clunie, Perthshire [JB: 24–25]

1793.08

Stachys arvensis

Cortachy, Angus

1792.10

Trientalis europaea

Craighall (near Blairgowrie), Perthshire

1793.08

Bryum tortuosum

Craig "oore", Breadalbane

1794.08

Salix Myrsinites

Dundee

2003

1793 1793.09

Centaurea scabiosa Lichen hypnorum

Edinburgh, Midlothian

No date	Vicia sativa
1793.03	Bryum ovatum
1702 12	T into

1793.12

Lichen

1794.03

Veronica agrestis

1794.04

Ficaria verna; Veronica arvensis

1794.05

Draba verna

1794.05

Oxalis acetosella; Plantago lanceolata

1794.07

Sisymbrium nasturtium

1794.12

Sagina apetala

Edinburgh, Braid Hill [JB: 19]

1794 Carex rostrata 1794.06 Stellaria glauca 1794.07 Littorella lacustris

Edinburgh, Caroline Park

1794.02

Fucus sanguineus

Edinburgh, Caroline Park to Cramond

1794.02

Conferva

Edinburgh, Colinton

1793.05

Hypnum bryoides

1794.03

Chrysosplenium oppositifolium

Edinburgh, Craiglockart

1794.04

Aphanes arvensis; Saxifraga tridactylites

Edinburgh, Cramond

1794.06

Salix monandra

Edinburgh, Duddingston Loch

1794

Sisymbrium terrestre

1794.05

Hippuris vulgaris

1794.07

Alisma ranunculoides; Epilobium hirsutum

Edinburgh, King's Park	[<i>JB</i> : 19]	
1793.01	Bryum atro-virens	
1793.03	Bryum virens; Lichen trapeziformis	
1793.05	Mnium hygrometricum;	
1794	Arabis thaliana; Arenaria verna; Geranium pyrenaicum; Lychnis	
	viscaria; Stellaria uliginosa; Turritis hirsuta; Veronica anagallis	
1794.01	Bryum tetragonum	
1794.02	Phascum piliferum	
1794.04	Arabis thaliana; Saxifraga granulata	
1794.05	Cardamine hirsuta; Cerastium viscosum; Erysimum alliaria;	
	Menyanthes trifoliata; Pinguicula vulgaris; Saxifraga hypnoides;	
	Valeriana locusta; Vicia lathyroides; Viola canina;	
1794.06	Hyoscyamus niger; Lotus corniculatus	
1794.07	Epilobium villosum	
Edinburgh, Salisbury Cr	ags	
1793.05	Primula officinalis	
1794.04	Cardamine hirsuta	
1794.06	Geranium sanguineum	
1794.07	Clinopodium vulgare	
Edinburgh to Linton		
1794.06	Primula farinosa	
Fifeshire		
1793.09	Anagallis arvensis	
1794.02	Hypnum clavellatum	
Invercauld, Aberdeenshi	re [<i>JB</i> : 23]	
1792.08	Anthericum calyculatum	
1793.08	Anthericum calyculatum	
Invercauld House, Aberdeenshire [JB: 23]		
1792.08	Juncus uniglumis	

Leith, Midlothian

1794.02	Conferva
1794.05	Symphytum tuberosum
1794.07	Plantago coronopus

Leith, St. Bernard's Spring

1793.12 Bryum simplex; Bryum undulatum

Leith to Musselburgh, Midlothian

1794.06 Poa retroflexa

Lochnagar (Balmoral) [JB: 26]

1794.08 Salix lapponum

Meall Ghaordaidh, Argyll [JB: 25]

Bryum falcatum; Bryum sericeum

Montrose, Angus

1792 Salicornia herbacea 1792.10 Aster tripolium

Pentland Hills

1793.04 Lichen muscicola

Queensferry

1794 Carex flava

1794.07 Astragalus uralensis [JB: 24 = Oxytropis halleri]; Carex; Carex

dioica; Carex vulpina; Silene nutans

River Isla [JB: 24]

1793.08 Bryum pomiforme var \$ weberi; Salix arbuscula

Roslin, Midlothian [JB: 19]

1794.02

No date Bryum pellucidum
1793.12 Bryum aciculare "; Bryum heteromallum; Bryum pellucidum;

Hypnum taxifolium Galanthus nivalis

1794.04 Allium ursinum; Hyacinthus non-scriptus

1794.05 Adoxa moschatellina; Anemone nemorosa; Carex pendula;

Chrysosplenium alternifolium; Myosotis scorpioides var. sylvestris;

Orobus tuberosus; Prunus avium; Prunus padus; Ranunculus

auricomus; Vaccinium myrtillus

Skye

1794.09 Eriocaulon septangulare [JB: 28]

St. Andrews [*JB*: 24]

1792.08 Vicia lathyroides1793.07 Schoenus rufus1793.08 Phalaris arenaria

St. Cyrus (north of Montrose)

1792.09 Vicia hybrida

Without locality

no date Hypnum

1793.03 Phascum cuspidatum

SCOTTISH PLANTS: CULTIVATED

Cortachy, Angus: [unnamed] garden

1794.08 Saxifraga sarmentosa [JB: 28 Saxifraga stolonifera]

Edinburgh: Botanic Garden

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No date	Spiraea hypericifolia
1793	Silene portensis
1793.10	Basella rubra
1794.10	Basella rubra
1793.11	Agrostis verticillatus; Hypoxis villosa; Lotus tetragonolobus; Perilla
	ocymoides; Phleum paniculatum; Physalis barbadensis; Piper
	pulchellum; Salvia coccinea;
1793.12	Alyssum halimifolium; Cerinthe major; Rivina humilis; Rivina
	laevis; Scoparia dulcis
1794	Ageratum conyzoides; Androsace septentrionalis; Anthospermum
1/21	aethiopicum; Calceolaria pinnata; Circaea alpina; Clutia pulchella;
	Cneorum tricoccum; Coffea arabica; Cyrilla pulchella; Cytisus
	capitatus; Dracocephalum sibericum; Euonymus europaeus var.
	tenuifolius; Fumaria fungosa; Fumaria spicata; Geranium
	anemonifolium; Glycine; Heuchera americana; Hydrophyllum
	virginicum; Hyoscyamus aureus; Illecebrum Achyrantha; Justicia
	ecbolium; Lantana odorata; Lapsana stellata; Limodorum tuberosum;
	Lobelia; Lobelia coronopifolia; Lycium; Melia azederach; Mimosa
	circinalis; Myrsine africana; Ocymum*; Ononis nastrix; Ornithogalum nutans; Panicum; Passiflora heterophylla; Pelargonium
	• • •
	tetragonum; Plumbago zeilanica; Poa glauca; Polygonum Fagopyrum; Psoralea bituminosa; Reseda Phyteuma; Rotboellia
	incurvata; Scilla hyacinthoides; Sida; Sideritis candicans; Solanum;
	Spartium multiflora; Spartium radiatum; Speillmania* africana;
	Teucrium fruticans; Tradescantia virginica; Tripsacum
	hermaphroditum; Urtica dodartii; Urtica gracilis; Veronica decussata;
1704.01	Xylophylla falcata
1794.01	Andromeda calyculata; Poa alpina
1794.02	Cactus pendula; Celsia occidentalis; Solanum
1794.03	Amygdalus communis; Anemone hepatica; Anemone hortensis;
	Arabis alpina; Buxus sempervirens; Cynoglossum omphalodes;
	Daphne laureola; Daphne mezereum; Glycine rubicunda [JB: 28
	Kennedya rubicunda]; Helleborus foetidus; Myrica gale; Pulmonaria
	officinalis var. flore albo; Saxifraga crassifolia
1794.04	Amygdalus nana; Andromeda polifolia var. angustifolia; Aquilegia
	canadensis; Asarum europaeum; Erica mediterranea; Euonymus
	latifolius; Fritillaria meleagris; Fritillaria imperialis; Geranium
	betulinum; Hyacinthus racemosus; Lamium rugosum; Lepidium
	iberis; Leucojum vernum; Mespilus cotoneaster; Orobus vernus;
	Ornithogalum nutans; Prunus armeniaca; Scilla amoena; Scilla
	hyacinthoides; Scrophularia verna; Sesleria caerulea; Smyrnium
	perfoliatum; Viburnum tinus; Vinca major
1794.05	Adonis vernalis; Alyssum saxatilis; Amaranthus; Anchusa
	angustifolia; Androsace septentrionalis; Begonia nitida; Calycanthus
	floridus; Cerastium latifolium; Cerastium tomentosum; Cheiranthus
	erysimoides; Convallaria majalis; Epimedium alpinum; Euphorbia
	dulcis; Galeopsis galeobdolon; Genista anglica; Geranium

	macrorhizon; Geranium phaeum; Geranium striatum; Geum; Glycine rubicunda; Iberis sempervirens; Mespilus amelanchier; Mespilus arbutifolia; Mespilus canadensis; Ornithogalum umbellatum; Peltaria alliacea; Phlox divaricata; Plectranthus fruticosus; Polygonum viviparum; Potentilla rupestris; Prunus pensylvanica; Pulmonaria virginica; Rhodora canadensis; Robinia caragana; Rosmarinus officinalis; Saxifraga rotundifolia; Scrophularia peregrina; Silene portensis; Sinapis laevigata; Solanum; Spiraea; Staphylea pinnata*;
	Stellaria nemorum; Vaccinium uliginosum; Vaccinium vitis-idaea; Viburnum lantana
1794.06	Aira canescens; Buddleia globosa; Cornus sanguinea; Cytisus sessilifolius; Dracocephalum ruchiana; Erysimum cheiranthoides; Euonymus europaeus var. ternifolius; Hippocrepis comosa; Hypericum reflexum; Oenothera pumila; Ptelea trifoliata; Salsola fruticosa; Samolus valerandi; Scrophularia scorodonia; Sideritis hirsuta; Spartium decumbens; Spartium radiatum; Tamarix
1704 06 27	germanica; Viola grandiflora; Zanthoxylon clava-herculis
1794.06.27 1794.07	Prunus lusitanica Alyssum incanum; Aralia racemosa; Astragalus cicer; Colutea cruenta; Cynosurus echinatus; Echium; Eclipta; Haloragis Cercodea;
	Hermannia denudata; Hyoseris lucida; Jasminum Sambac; Malva; Melilotus glaucus; Melilotus Italicus; Milium paradoxum; Monarda didyma; Nolana prostrata; Oxalis stricta; Prasium majus; Prenanthes purpurea; Psoralea corylifolia; Rubia peregrina; Scolymus hispanica; Scorzonera picroides; Solanum nigrum var. indicum ?; Sonchus floridanus; Stipa juncea; Telephium Imperati; Thlaspi arvense; Vicia Narbonensis; Zinnia pauciflora
1794.09	Cardiospermum halicacabum; Chelone glabra; Cistus salicifolius; Hedysarum bupleurifolium; Justicia malabarica; Molucella laevis; Phyllanthus?; Sida asiatica
1794.10	Achania Malvaviscus*; Arbutus unedo; Asphodelus fistulosus; Aster Novae-angliae; Cannarina campanula; Celsia Arcturus; Cestrum diurnum; Clethra alnifolia; Crotollaria retusa*; Galenia africana; Grewia occidentalis; Hedysarum gangeticum; Illecebrum lanatum var.; Indigofera; Lobelia sp.; Lobelia syphilitica; Magnolia glauca; Medeola asparagoides; Oenothera rosea; Panicum miliaceum; Panicum sericeum; Pelargonium crispum; Pentapetes phoenicea;
	Phlox paniculata; Phylica ericoides; Phytolacca; Triumfetta triloba; Verbena Aubletia; Xeranthemum annuum
1794.11	Coronilla glauca; Coronilla valentina; Hermannia alnifolia; Panicum crus-corvi; Scrophularia peregrina; Sida
1794.12	Lepidium iberis; Lobelia "cliffordiana"; Oenothera rosea; Sida
1794.12.30	Indigofera
1795.01	Myrtus; Solanum
1795.03	Glycine coccinea : Justicia ecbolium Glycine bimaculata
1795.03.10	Ofycine officeutata

Edinburgh, Mr. Dickson's garden, Leith Walk

1794.04 Hyacinthus Muscari

Edinburgh, Dickson's Nursery, Leith Walk [JB: 19, 33]

No date	Veronica saxatilis
1794	Buphthalmum grandiflorum; Carex capillaris; Cerastium arvense;
	Cistus appeninus; Draba incana; Erica Daboeci; Kalmia angustifolia;
	Juncus triglumis [JB: 25]; Kalmia glauca; Lepidium alpinum;
	Oxalis incarnata; Passerina filiformis; Phlox glaberrima; Pulmonaria
	maritima; Scandix cerefolium; Sedum dasyphyllum; Sibthorpia
	europaea; Silene conica; Silene orchidea; Uvularia amplexicaulis;
	Veronica alpina; Viola "montana"
1794.03	Anemone appenina
1794.04	Arabis alpina varietas; Arabis hispida; Clutia alaternoides foemina;
	Diosma capitatum; Dirca palustris; Erica; Hyacinthus muscari;
	Sanguinaria canadensis; Tussilago alpina
1794.05	Arabis hispida; Asperula laurina; Comptonia asplenifolia; Erodium
	trilobatum; Euphorbia Esula; Euphorbia lathyrus; Fothergilla
	alnifolia; Kalmia glauca; Ledum buxifolium; Ledum latifolium;
	Ledum palustre; Lonicera media; Medicago arborea; Mitella diphylla;
	Polemonium reptans; Prunus; Salix lapponum; Salix myrsinites;
	Sibbaldia procumbens; Silene nutans [JB: 28]; Viola striata
1794.06	Cineraria maritima; Genista germanica; Genista italica; Geranium
	lividum; Prunus Verticillata; Sedum anglicum; Viola cucullata
1794.07	Achillea alpina; Achillea macrophylla; Aster Miser?; Ceanothus
	americanus; Cerastium aquaticum; Cheiranthus tricuspidatus;
	Chelidonium hybridum; Ornithopus compressus; Phlox undulata;
	Plantago loefflingii; Rudbeckia fulgida; Silene behen; Vicia hybrida
1794.09	Vicia bithynica; Vicia lutea
1794.10	Aster
1797.01	Celastrus buxifolius; Chironia linoides; Erica spp; Erica australis;
	Erica capitata; Erica curviflora; Erica parviflora; Erica pubescens;
	Erica ramentacea; Genista candicans; Hypericum coris; Philadelphus
	scoparius; Polycarpum tetraphyllum; Ruta chalepensis
1797.02	Helleborus hyemalis; Helleborus niger

Edinburgh, Leslie & Co. Nursery, Bonniton Road, Broughton

1794	Diosma ericoides
1794.06	Bubon gummiferum; Diosma ericoides; Erodium ciconium
1794.07	Hypericum monogynum; Jasminum humile [JB: 28]

Edinburgh, Mrs Scot's garden [JB: 28]

1794.06 Cytisus foliolosus [JB: 28 Adenocarpus foliolosus]

Edinburgh, Dr. Walker's garden, Colinton [JB: 19, 28]

1794	Anthericum liliastrum; Brassica monensis; Phlox suaveolens;
	Serratula alpina: Veronica fruticulosa [JB: 28]

1794.03 Cardamine trifolia; Scilla bifolia [*JB*: 28]

"Datisca cannabina"; Galium spurium; Lysimachia quadrifolia; Salix

argentea [JB: 28 but there stated to have been seen in Dickson's

Nursery]; Salix lucida

1794.11 Salix ligustrifolia [JB: 28]; Salix retusa

Edinburgh, [unnamed] garden

1794.05

Hesperis matronalis

Morden (near Edinburgh) [JB: 28]

Anagallis Monelli; Canella alba; Convallaria japonica; Corypha

umbraculifera [JB: 28]; Dracaena ensifolia; Malva spicata; Passiflora serratifolia; Pelargonium scabrum; Rubus arcticus; Tradescantia

discolor

1794.06 Salvia trilobata

Roslin Castle: garden of the inn: Midlothian [JB: 28]

1794.05 Syringa vulgaris [*JB*: 28]

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